CLAIMS

1. An *in vitro* method for determining the risk of developing thrombosis in a subject, which method comprises identifying polymorphisms of EPCR gene on at least one of positions 1651, 3610, 4216, and 6936 (SEQ ID No:1), wherein the presence of G at position 1651, C at position 3610, A at position 4216, or G at position 6936 is indicative of a higher risk to develop thrombosis in comparison with a control subject that does not show the same polymorphisms.

2. An *in vitro* method according to claim 1, which method comprises identifying polymorphisms of EPCR gene at positions 1651, 3610, 4216, 6936, 3787, 3877, 4868, 5233, 5760, 6333, 7014, 7968, 7999 of SEQ ID No: 1, wherein the simultaneous presence of :

- G at position 1651
- C at position 3610
- A at position 4216
- G at position 6936
- C at position 3787
- G at position 3877
- T at position 4868
- G at position 5233
- T at position 5760
- T at position 6333
- G at position 7014
- A at position 7968
- G at position 7999

are designated A3 haplotype and, when present on at least one allele, are indicative of a higher risk to develop thrombosis in comparison with a control subject without any A3 allele.

3. The method according to claim 1 or 2, wherein said thrombosis is a venous thrombosis.

4. The method according to any of claims 1 to 3, wherein the analysis is undertaken on genomic DNA that is extracted from a biological sample of the subject.

5. The method according to any of claims 1 to 4, wherein the analysis comprises a step of amplification of the genomic DNA.

6. The method according to any of claims 1 to 5, wherein the polymorphisms of the EPCR gene are identified by sequencing.

7. The method according to any of claims 1 to 6, wherein at least one of the polymorphisms of the EPCR gene is identified by RFLP analysis.

8. The method according to claim 7, comprising identifying the polymorphism of EPCR gene on position 6936, by creating a restriction site for endonuclease *PstI* by amplification of the EPCR gene with mutagenic primers, when the amplified fragment contains an A at position 6936, so that when the amplified fragment containing a G, it remains undigested.

9. An isolated nucleic acid encoding the EPCR receptor, that comprises SEQ ID No:2.

10. A kit suitable for the methods according to any of claims 1 to 6, which kit comprises a pair of nucleotide primers specific for amplifying all or part of the EPCR gene comprising at least one of positions 1651, 3610, 4216 of SEQ ID No:1.

11. A method for genotyping the EPCR gene, which method comprises identifying the polymorphism of the EPCR gene at position 4216 (SEQID No: 1), wherein the presence of C at position 4216 shows the A1 haplotype, the presence of G at position 4216 shows the A2 haplotype, and the presence of A shows the A3 haplotype.